FL CAT5 HEAVY
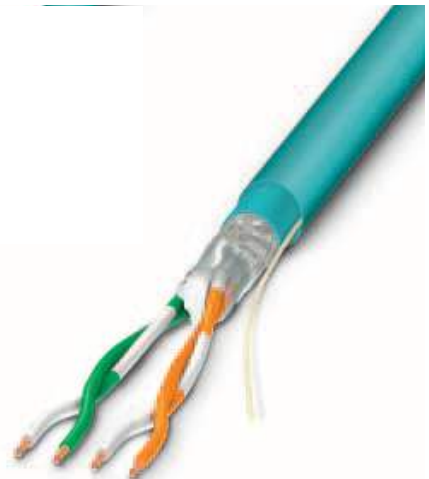
Heavy Ethernet Installation Cable
for Category 5e Applications

INTERFACE

Data Sheet
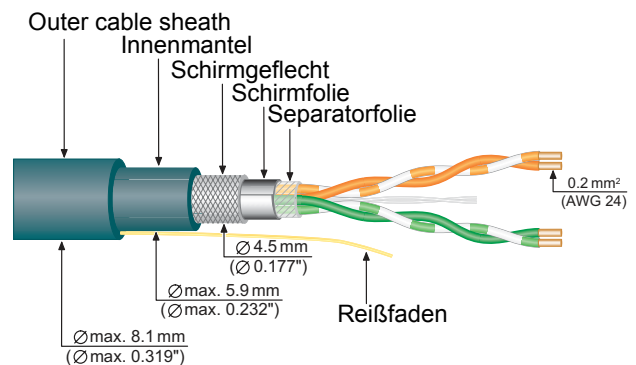100440_01_en

Description

The **FL CAT5 HEAVY** installation cable with twisted-pair solid wires is particularly suitable for permanent installation outside the control cabinet/switch box. It has been specifically developed for Category 5e industrial Ethernet applications (up to 100 Mbps) and features a very robust second outer sheath made from polyurethane (PUR). With an outside diameter of 7.5 mm, the cable has a high level of mechanical capability and is ideal for leading through standard threaded cable joints. Within the control cabinet, the second outer sheath is easily removed using a tearing wire. The diameter is then 5.9 mm maximum, enabling the cable to be directly assembled with the RJ45 connector and connected to the modules. Cable lengths up to 100 m are permitted in accordance with CAT 5e.

FL PLUG… connectors and the corresponding FL CRIMPTOOL crimping pliers are available for field termination. It is recommended that the connector set (2 connectors) with the gray bending protection bushing be used for uncrossed connections and that the connector set with the green bending protection bushing be used for crossover connections.

Outer cable sheath
Innenmantel
Schirmgeflecht
Schirmfolie
Separatorfolie
$\varnothing$ 4.5 mm ($\varnothing$ 0.177")
$\varnothing$ max. 5.9 mm ($\varnothing$ max. 0.232")
$\varnothing$ max. 8.1 mm ($\varnothing$ max. 0.319")
0.2 mm² (AWG 24)
Reißfaden

👉 If you have any technical problems, which you cannot resolve with the aid of this documentation, please contact us during the usual office hours at:

PSI hotline: +49 - 52 35 - 31 98 90
Fax: +49 - 52 35 - 33 09 99
E-mail: interface-service@phoenixcontact.com

👉 Make sure you always use the the latest documentation.
It can be downloaded at www.download.phoenixcontact.com

A conversion table is available on the Internet.
It can be downloaded at www.download.phoenixcontact.com/general/7000_en_00.pdf.

PHOENIX CONTACT
INSPIRING INNOVATIONS

Ordering Data

Cable

Description	Type	Order No.	Pcs./Pkt
CAT 5e SF/UTP cable, heavy installation cable 2 x 2 x 0.14 mm^2, solid wire, shielded	FL CAT5 HEAVY	2744814	1

Connectors

Description	Type	Order No.	Pcs./Pkt
RJ45 connector set, shielded, with bending protection bushing, 2 pieces			
Gray for straight cable	FL PLUG RJ-45 GR/2	2744856	1
Green for straight cable	FL PLUG RJ-45 GN/2	2744571	1
Plug connector RJ45, IP20, CAT5e, 8-pos., with QUICKON fast connection method, for 1-wire and 7-wire conductors AWG 26 ... 22, for cable diameter 4.5 mm ... 8.0 mm	VS-08-RJ45-5-Q/IP20	1656725	1

Tools

Description	Type	Order No.	Pcs./Pkt
Crimping pliers, for assembling the RJ45 connectors	FL CRIMPTOOL	2744869	1
Stripping tool, for conductors and cables of 0 mm to 11 mm diameter	CYCLOPS	1204481	1

Passive Connection Field

Description	Type	Order No.	Pcs./Pkt
Passive connection field, 4 x screw terminal block on RJ45 female connector, as an alternative to on-site assembly with preassembled RJ45 patch cables	FL CAT TERMINAL BOX	2744610	1

Technical Data

Electric Properties

Loop resistance	192 Ω/km, max.
Operating capacity	48 nF/km
Surge impedance	100 Ω ±15 Ω
Category CAT 5e	In accordance with IEEE 45 and IEEE 50

Outer Cable Sheath

Material	Halogen-free PUR compound, HM 2 in accordance with VDE 0207-24
Color	Water blue RAL 5021
Diameter	7.5 mm ±0.3 mm
Tearing wire	Lengthways, metal-free to tear the outer cable sheath
Marking	PHOENIX CONTACT FL CABLE CAT.5 HEAVY 2 x 2 x 24 AWG and continuous meter marking

Inner Cable Sheath

Material	Halogen-free compound, HM 2 in accordance with VDE 0207-24
Color	Water blue RAL 5021
Diameter	5.6 mm ... 5.9 mm
Marking	PHOENIX CONTACT FL CABLE CAT.5 FLEX 2 x 2 x 26 AWG and continuous meter marking
Shielding	Plastic-coated aluminum foil, braid from tin-plated copper wires (UTP/BS), coverage 85% ±5%

Individual Wires

Wires	Solid copper wire, plain
Cross section	0.22 mm^2
Diameter of the insulation	1.0 mm, foam skin (polyethylene)
Insulation voltage	
Core-core	1000 V$_{eff}$
Core-shield	500 V$_{eff}$
Twisting	Wires to pairs, pairs are arranged to form a cable core
Colors	
Pair 1	White/orange – orange
Pair 2	White/green – green

General Data

Abbreviated cable designation	J-02YS(ST) C HP 2 x 2 x 24 AWG
Temperature range	
Installation	-5°C ... +60°C
Operation	-30°C ... +80°C
Minimum bending radius	
Flexible	45 mm
Permanently installed	30 mm
Permissible tensile load	
During installation	130 N
After installation	65 N
Fire load	0.41 kWh/m
Burning behavior	Flame-retardant in accordance with VDE 0482-265-1 and IEC 60332-1
Chloroform test	Free from substances that could impair the application of coating in accordance with the central standard 57650 of VW, Audi, and Seat
Freedom from halogen	Halogen-free compound, HM 2 in accordance with VDE 0207-24
Resistance to oil	In accordance with EN 60811-2-1/VDE 0473-811-2-1
Resistance to UV radiation	In accordance with VDE 0282-2, HD 22.1, S3/SEV TP 20B/3C
Resistance to ozone	In accordance with SEV TP 20/3C
Weight	63 kg/km, approx,